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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,872	01/23/2002	James N. Walpole	0003.0001.co	9204

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HOUSTON ELISEEVA
4 MILITIA DRIVE, SUITE 4
LEXINGTON, MA 02421

EXAMINER

NGUYEN, TUAN N

ART UNIT	PAPER NUMBER
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2828

DATE MAILED: 04/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/055,872

Applicant(s)

WALPOLE ET AL.

Examiner

Tuan N Nguyen

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on ____ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-21 are rejected under 35 U.S.C 112, second paragraph, as being indefinite, vague, and confusing for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, for example.

Claims 1, and 17 being indefinite when saying “a first tilted facet and second tilted facet located at either end of the strip” – it is vague in that if the facets are at both ends or at one end of the semiconductor only. It is further indefinite in that “a first fiber pigtail having an endface positioned opposite the first tilted facet; and a second fiber pigtail having an end face positioned opposite the second tilted facet” – is there any functional significant by having the fiber facing the tilted facet? Structurally is it directly coupled to or is it coupling the light output from the facet at a distance? It is further indefinite with claim 17 – whether the active waveguide within the semiconductor is tilted or it is the front facet of the semiconductor is tilted (not parallel) which create an incline/tilted on the waveguide beam output. It is not clear the significant of the “lowest order spatial mode that is greater than 5 micrometer in diameter” and the “overmoded” in claim 14. There is insufficient structure and functional relationship to conform a semiconductor optical system, which render the claims vague and indefinite. Claims 2-16 and 18-21 are rejected base on the same reason.

Art Unit: 2828

Claim Rejections - 35 USC § 102

3 The following is a quotation of 35 U.S.C. 102(e) which forms the basis for all obviousness rejections set forth in this Office action:

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1, 5-6, 15-18, 20 are rejected under 35 U.S.C. 102(e) as being unpatentable over Alphonse (US 6430207) (09/205 575).

With respect to claims 1, 17, 18 Alphonse '207 discloses laser with transverse mode filter and shows an semiconductor optical system having an edge emitting semiconductor having a first and second tilted facet and first and second pigtail fibers (F 6: 410, 411, 412, 440, 450, 420, 420a/b, 430, 430a/b, 460) (F7, F8, F3) and highly reflecting back facet and output mirror and filter between output facet and mirror (Col 1-2: 62-7) (F 1: 100, 110, 120, 130) (F9, F10).

With respect to claims 5-6, 15, 16, 20 Alphonse '207 discloses the first and second fiber single mode and spatial multi mode in (Col 1: 35-60) and single mode fiber grating (F6: 420, 430).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2828

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or non-obviousness.
6. Claims 2-4, 7-14, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alphonse (US 6430207) (09/205 575).

With respect to claims 2-4, 8-12, 21 Alphonse '207 shows in (F 3, 6-10) the tiled facet angles, spatial mode, and strip length. Discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

With respect claims 6, 7 and 19 Alphonse '207 shows in (F 3, 6-10) the fiber coupling signal from semiconductor output facet (Col 4:50-56). Constructing a formerly integral structure involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

With respect to claims 13, 14 Alphonse '207 discloses the tilted facet, anti reflection coating, and over mode (F 9)(Col 8: 53-67; Col 9: 0-30). It is within the general skill of a worker in the art at the time the invention was made to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Citation of Pertinent References

Art Unit: 2828

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. It is cited primarily to show the product of the instant invention.

Alphonse (US006339606B1)/(US 4789881), Uchida (US005396481A), Goto (US 20020071470A1), Alphonse et al. (US 4958355), DeMars et al. (US006122299A), Kuroda et al. (US 4432091) disclose tilted semiconductor.

Communication Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan N Nguyen whose telephone number is (703) 605-0756. The examiner can normally be reached on M-F: 7:30 - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-8592 for regular communications and (703) 746-8592 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

Tuan N. Nguyen



April 2, 2003



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